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-	12	(("6198946" "4787032" "6393569" "5586304" "5588143" "5809287" "5960189" "4291196" "5210854" "5488356" "5418960" "5815667" "5737585" "4292465" "5960342" "5410681" "5669000" "5901320" "6581157" "6584559" "5943029" "6219836" "6219836" "5968141" "6745324" "5640562" "6615404" "4442486" "4454594" "6201854" "5511180" "6108712" "6145085" "5930504" "5805676" "5987103" "5758099" "6488585" "5673385" "6055632" "6275931" "6606298" "4538223" "5608805" "6622302"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 09:08
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-	61	5586304.URPN.	USPAT	2004/06/08 09:23
-	1	5586304.URPN. and ((upgrad\$3 or updat\$3) with firmware)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 09:51
-	5	5586304.URPN. and (firmware)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 09:52
-	6458	Nortel adj Networks	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 10:38

-	9	(Nortel adj Networks) and (firmware with (upgrad\$3 or updat\$3))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 10:39
-	451	((upgrad\$3 or updat\$3) with firmware with hardware)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 11:00
-	11	((upgrad\$3 or updat\$3) with firmware with ((third adj party) or remote) with hardware)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 11:04
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-	92	((upgrad\$3 or updat\$3) with firmware) same hardware) and LAN and WAN	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/06/08 11:08
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Kevin Almeroth, Jim Griffioen

May 2002 proceeding, ACM Press

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Welcome to the 2002 International Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV'02) in Miami Beach, Florida. This is now the 12th year that NOSSDAV has been bringing together researchers and developers to discuss the latest advances and explore future directions for multimedia systems. This year's NOSSDAV is unique as it marks the first time it is being held in conjunction with the International Workshop on Quality of Service (IWQoS). IWQoS is a highly suc ...

 2 [An object-oriented model for the semantic interpretation of multimedia data](#)

James Griffioen, Raj Yavatkar, Robert Adams

January 1995 **Proceedings of the third ACM international conference on Multimedia**Full text available: [htm\(11.37 KB\)](#) Additional Information: [full citation](#), [index terms](#)
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James Griffioen, Rajiv Mehrotra, Rajendra Yavatkar

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 4 [Lightweight network support for scalable end-to-end services](#)

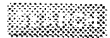
Kenneth L. Calvert, James Griffioen, Su Wen

August 2002 **ACM SIGCOMM Computer Communication Review, Proceedings of the 2002 conference on Applications, technologies, architectures, and protocols for computer communications**, Volume 31 Issue 4Full text available: [pdf\(331.84 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Some end-to-end network services benefit greatly from network support in terms of utility and scalability. However, when such support is provided through service-specific mechanisms, the proliferation of one-off solutions tend to decrease the robustness of the network over time. Programmable routers, on the other hand, offer generic support for a variety of end-to-end services, but face a different set of challenges with respect to performance, scalability, security, and robustness. Ideally, rou ...



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### 1 [Accelerating shared virtual memory via general-purpose network interface support](#)

Angelos Bilas, Dongming Jiang, Jaswinder Pal Singh

February 2001 **ACM Transactions on Computer Systems (TOCS)**, Volume 19 Issue 1Full text available: [pdf\(178.88 KB\)](#)
 Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

Clusters of symmetric multiprocessors (SMPs) are important platforms for high-performance computing. With the success of hardware cache-coherent distributed shared memory (DSM), a lot of effort has also been made to support the coherent shared-address-space programming model in software on clusters. Much research has been done in fast communication on clusters and in protocols for supporting software shared memory across them. However, the performance of software virtual memory (SVM) is sti ...

**Keywords:** applications, clusters, shared virtual memory, system area networks

### 2 [StarT-Voyager: a flexible platform for exploring scalable SMP issues](#)

Boon S. Ang, Derek Chiou, Daniel L. Rosenband, Mike Ehrlich, Larry Rudolph, Arvind

November 1998 **Proceedings of the 1998 ACM/IEEE conference on Supercomputing (CDROM)**Full text available: [html\(49.51 KB\)](#)
 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

This paper describes StarT-Voyager, a machine designed as an experimental platform for research in cluster system communication. The heart of StarT-Voyager is a network interface unit (NIU) that connects the memory bus of a PowerPC-based SMP to the MIT Arctic network. The NIU is highly flexible, with its set of functions easily modified by firmware or by programmable hardware, making it possible to compare different communication interfaces and implementation strategies on a common platform. Its ...

**Keywords:** configurable hardware, flexible, message passing, network interface unit, parallel systems, shared memory

### 3 [U-Net: a user-level network interface for parallel and distributed computing \(includes URL\)](#)

T. von Eicken, A. Basu, V. Buch, W. Vogels

December 1995 **ACM SIGOPS Operating Systems Review , Proceedings of the fifteenth ACM symposium on Operating systems principles**, Volume 29 Issue 5Full text available: [pdf\(1.84 MB\)](#)
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